

Please amend the claims as shown in the following claim listing. The text of any added material is shown in underline, and the text of any deleted matter is shown by ~~strikethrough~~, except that double brackets [[]] placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. Deletions are shown in ~~[[strikethrough and double brackets]]~~ where the strikethrough cannot be easily perceived. The following claim listing serves to replace all prior versions of the claims. All claims that are cancelled are cancelled without prejudice.

Listing of Claims:

1. (currently amended) A method for controlling valve operation of valves coupled to a cylinder of an internal combustion engine with a piston, the method comprising:

varying compression ratio, valve timing, and valve lift, of the engine;

indicating potential interference between the piston and the valve;

~~selecting at least one of valve timing and valve lift based on a~~ during a first set of directions of valve timing change ~~[[and]] valve lift change, and compression ratio, adjusting valve timing to reduce said potential for interference;~~ and

during a second set of directions of valve timing change and valve lift change, and compression ratio, ~~in response to said indication, limiting said selected one of valve timing, and~~ adjusting valve lift to reduce said potential for interference.

2. (original) The method recited in Claim 1 wherein said indication of potential interference is an indication of operation at conditions where clearance between a piston and an intake valve is below a threshold value when the piston is at a top dead center position.

3. (original) The method recited in Claim 1 wherein said indication of potential interference is based on current operating conditions.

4. (original) The method recited in Claim 3 wherein said current operating conditions include cam timing.

5. (original) The method recited in Claim 3 wherein said current operating conditions include valve lift.

6. (original) The method recited in Claim 3 wherein said current operating conditions include compression ratio.

7. (original) The method recited in Claim 6 wherein said compression ratio is a current compression ratio value of a variable compression ratio system.

8. (currently amended) The method recited in Claim 1 wherein said first and second set of conditions are selected based on whether at least one of valve timing and valve lift are changing in a direction that reduces potential clearance.

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9. (currently amended) The method recited in Claim 1 wherein said ~~limiting~~ adjusting ~~said selected one of valve timing~~ ~~[[and]]~~ or valve lift includes limiting position of travel to a selected range.

10. (currently amended) The method recited in Claim 1 wherein said adjusting ~~limiting said selected one of valve timing~~ ~~[[and]]~~ or valve lift includes limiting position of travel to a maximum value.

11. (currently amended) A method for controlling valve operation of valves coupled to a cylinder of an internal combustion engine with a piston, the method comprising:

indicating potential interference between the piston and the valve based on engine valve timing, valve lift, and compression ratio;

~~selecting at least one of valve timing and valve lift based on a~~ during a first set of directions of valve timing change and valve lift change, adjusting valve timing to reduce said potential for interference; [[and]]

during a second set of directions of valve timing change and valve lift change ~~in response to said indication limiting said selected one of valve timing and~~ adjusting valve lift to reduce said potential for interference; and

adjusting engine torque to compensate for a torque effect of said adjusting.

12. (original) The method recited in Claim 11 wherein said indication of potential interference is an indication of operation at conditions where clearance between a piston and an intake valve is below a threshold value when the piston is at a top dead center position.

13. (currently amended) The method recited in Claim 11 wherein said **first set of directions include when** ~~selecting is based on whether at least one of valve timing and valve lift~~ **is** ~~[[are]]~~ changing in a direction that reduces potential interference, **and said second set of directions include when valve lift is changing in a direction that reduces potential interference.**

14. (currently amended) The method recited in Claim 11 wherein said ~~limiting~~ **adjusting** ~~said selected one of valve timing~~ ~~[[and]]~~ **or** valve lift includes limiting position of travel to a selected range.

15. (currently amended) The method recited in Claim 11 wherein said **adjusting** ~~limiting~~ ~~said selected one of valve timing and valve lift~~ includes limiting position of travel to a maximum value.

16. (original) The method recited in Claim 11 further comprising adjusting compression ratio based on engine or vehicle operating conditions.

17. (currently amended) A computer storage medium having instructions encoded therein for controlling valve operation of valves coupled to a cylinder of an internal combustion engine with a piston, the engine in a powertrain in a vehicle on the road, said medium comprising:

~~code for indicating potential interference between the piston and the valve;~~

~~code for selecting at least one of valve timing and valve lift based on a direction of valve timing change and valve lift change; and~~

~~code for adjusting said selected one of valve timing and valve lift to reduce said potential for interference in response to said indication.~~

code for identifying potential interference between the piston and the valve based on engine valve timing, valve lift, and compression ratio;

code for, during a first set of directions of valve timing change and valve lift change, adjusting valve timing to reduce said potential for interference;

code for, during a second set of directions of valve timing change and valve lift change, adjusting valve lift to reduce said potential for interference; and

code for adjusting engine torque to compensate for a torque effect of said adjusting.

18. (currently amended) The system of claim 17 wherein said code for adjusting ~~[[said]]~~ one of ~~selected one further~~ valve timing and valve lift comprises code for limiting a position of said ~~selected one of~~ valve timing ~~[[and]]~~ or valve lift.

19. (currently amended) The system of claim 18 wherein said code for adjusting ~~[[said]]~~ one of valve timing and valve lift further comprises code for limiting a position and a rate of change of one of valve timing and valve lift.

20. (currently amended) The system of claim 17 wherein said code for adjusting ~~said-selected~~ one of valve timing and valve lift further comprises adjusting both said valve timing and valve lift.

21. (original) The system of claim 17 wherein said code for adjusting is carried out during engine operation.

22. (currently amended) The system of claim 17 further comprising code for, wherein said during a second set of directions of valve timing change and valve lift change, adjusting compression ratio to reduce said potential for interference ~~code for adjusting further comprising adjusting each of valve timing, valve lift, and compression ratio.~~

23. (cancelled).